

29. (once amended) An isolated nucleic acid fragment comprising a nucleic acid sequence selected from the group consisting of (a) a nucleic acid sequence encoding a delta-15 fatty acid desaturase with an amino acid identity of 50% or greater to a polypeptide having an amino acid sequence of any one of SEQ ID NOS:2, 5, 7, 9, 11, 13, 15 or 17 or (b) a nucleic acid sequence or complement thereof or part thereof which is useful in antisense inhibition or sense suppression of endogenous desaturase activity in a transformed plant wherein the nucleic acid sequence encodes a polypeptide with an amino acid identity of 50% or greater to the polypeptide having the amino acid sequence of any one of SEQ ID NOS:2, 5, 7, 9, 11, 13, 15 or 17.

33. (once amended) Seeds obtained from the plants of claim 32 wherein said seeds are transformed with the chimeric gene of claim 31.

Remarks

Claim 27 has been amended to correct a typographical error. These claims have been amended so as to depend from a pending claim which has antecedent basis for a method. In addition, cocoa and safflower have been added to the recitation. Support for this can be found in the specification on page 23 at lines 1-16 and in claim 10 as originally filed. Thus, no new matter has been added.

Claim 28 has been deleted as being redundant.

Claims 1 and 29 and claims 21-24, 26-28 and 30-33 dependent thereon, were rejected under 35 USC §112, second paragraph. Claims 1 and 29 have been amended so as to refer to the appropriate nucleotide sequences. Support for all of these sequences can be found in the specification on pages 10-14. Thus, no new matter has been added.

Claims 24 and 33 were rejected under 35 USC §101 on the ground that the "claimed invention is directed to non-statutory subject matter."

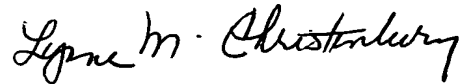
These claims have been amended so as to more clearly recite that the chimeric gene transformed into the parent plant is present in the claimed seeds. Thus, the claimed seeds are distinguishable from naturally occurring seeds.

In view of the above amendments and discussion, it is respectfully submitted that this case is now in form for allowance which allowance is respectfully solicited.

A marked-up version of the rewritten claims are attached as a separate page to this amendment and is titled "Version With Markings to Show Changes Made." Deletions are bracketed and inserted material is underlined.

Any fees associated with the filing of this Response and the Petition for Extension of Time should be charged to Deposit Account 04-1928 (E. I. du Pont de Nemours and Company). If the fee is insufficient or incorrect, please charge or credit the balance of the above-identified account.

Respectfully submitted,



LYNNE M. CHRISTENBURY
ATTORNEY FOR APPLICANTS
REGISTRATION NO. 30,971
TELEPHONE: 302-992-5481
FACSIMILE: 302-892-1026

Dated: May 2, 2001
Enclosures

RECEIVED

MAY 09 2001



VERSION WITH MARKINGS TO SHOW CHANGES MADE

TECH CENTER 1600/2900

In showing the changes, deleted material is bracketed, and inserted material is shown as underlined.

In the Claims

Kindly delete claim 28.

1. (thrice amended) An isolated nucleic acid fragment comprising a nucleic acid sequence selected from the group consisting of (a) a nucleic acid sequence encoding a plant plastid or microsomal enzyme which catalyzes the formation of a double bond between carbon positions 3 and 4 numbered from the methyl end of a fatty acyl chain wherein said enzyme has an amino acid identity of 50% or greater to [the] a polypeptide having an amino acid sequence of any one of [encoded by] SEQ ID NOS:2, 5, 7, 9, 11, 13, 15 or 17 or (b) a nucleic acid sequence, or complement thereof or part thereof which is useful in antisense inhibition or sense suppression of endogenous desaturase activity in a transformed plant wherein the nucleic acid sequence encodes a polypeptide with an amino acid identity of 50% or greater to the polypeptide having the amino acid sequence of any one of [encoded by] SEQ ID NOS:2, 5, 7, 9, 11, 13, 15 or 17 [or (b) or part thereof].

24. (thrice amended) Seeds obtained from the plants of claim 23 wherein said seeds are transformed with the chimeric gene of claim 22.

27. (once amended) [A] The method of claim [25] 26 wherein said plant cell of an oil-producing species is selected from the group consisting of *Arabidopsis thaliana*, soybean, oilseed *Brassica napus*, sunflower, safflower, cocoa, cotton, peanut, and corn.

29. (once amended) An isolated nucleic acid fragment comprising a nucleic acid sequence selected from the group consisting of (a) a nucleic acid sequence encoding a delta-15 fatty acid desaturase with an amino acid identity of 50% or greater to [the] a polypeptide having an amino acid sequence of any one of [encoded by] SEQ ID NOS:2, 5, 7, 9, 11, 13, 15 or 17 or (b) a nucleic acid sequence or complement thereof or part thereof which is useful in antisense inhibition or sense suppression of endogenous desaturase activity in a transformed plant wherein the nucleic acid sequence encodes a polypeptide with an amino acid identity of 50% or greater to the polypeptide having the amino acid sequence of any one of [encoded by] SEQ ID NOS:2, 5, 7, 9, 11, 13, 15 or 17 [or part thereof].

33. (once amended) Seeds obtained from the plants of claim 32 wherein said seeds are transformed with the chimeric gene of claim 31.